

Docket No.: M4065.0372/P372
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Stephen L. James

Application No.: 09/808,156

Group Art Unit: 2827

Filed: March 15, 2001

Examiner: J. Norris

For: SINGLE SIDED ADHESIVE TAPE FOR
COMPOUND DIVERSION ON BOC
SUBSTRATES

SUPPLEMENTAL AMENDMENT UNDER 37 CFR § 1.116

Box AF
Commissioner for Patents
Washington, DC 20231

Dear Sir:

Further to Applicant's Amendment Under 37 CFR § 1.116 filed February 5, 2003,
and the Advisory Action mailed March 17, 2003, please amend the above-identified U.S.
patent application as follows.

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Amendments to the Written Description

Page 6, lines 3-11:

While an exemplary embodiment of the invention has been described and illustrated, it is to be understood that the above description is intended to be illustrative and not restrictive. Many variations to the above-described system and method will be readily apparent to those having ordinary skill in the art. For example, a single-sided or double-sided piece of adhesive tape may be used as the diversion material. Further, instead of using adhesive tape for the diversion dam a thin layer of other material can be deposited between the die and circuit board, where the thin layer of material has sufficient heating characteristics to maintain its form during encapsulation.

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Amendments to the Claims

1-22. (Cancelled)

23. (Original) A die mounting structure comprising:

a die;

a circuit board containing a wirebond slot;

a first piece of double side adhesive tape secured between said die and said circuit board, said first piece of tape being parallel to a length of said wirebond slot, said first piece of tape residing on a first side of said wirebond slot;

a second piece of double side adhesive tape secured between said die and said circuit board, said second piece of tape being parallel to said length of said wirebond slot in said circuit board; said second piece of tape residing on a second of said wirebond slot; and

a third piece of tape perpendicular to said first and second pieces of doubled sided tape, said third piece of tape contacting said first and second pieces of doubled sided tape to form an encapsulated diversion dam.

24. (Currently amended) The structure of claim 23, ~~where~~ wherein said third piece of tape is a single sided adhesive tape.

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25. (Original) The structure of claim 23, wherein said third piece of tape is provided at a location adapted to face an inlet for an encapsulation compound.

26. (Original) The structure of claim 23, wherein said third piece of tape resides on said die.

27. (Original) The structure of claim 23, wherein said third piece of tape resides on said circuit board.

28. (Original) The structure of claim 23, wherein said die includes a memory device.

29. (Original) The structure of claim 23, wherein said die includes a processor.

41. (New) A structure for use in a semiconductor package, said structure comprising:

a first adhesive material provided between a die and a circuit board, said first adhesive material in parallel to a length of a wirebond slot in said circuit board, said first adhesive material residing on a first side of said wirebond slot;

a second adhesive material provided between said die and said circuit board, said second adhesive material in parallel to said length of said wirebond slot in

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said circuit board; said second adhesive material residing on a second side of said wirebond slot; and

a third material provided on said circuit board and extending between said first and second materials to form a diversion dam for an encapsulation material, wherein said third material is an adhesive tape.

42. (New) The structure of claim 41, wherein said first material is an adhesive tape.

43. (New) The structure of claim 42, wherein said adhesive tape is a double sided adhesive tape.

44. (New) The structure of claim 41, wherein said second material is an adhesive tape.

45. (New) The structure of claim 44, wherein said adhesive tape is a double sided adhesive tape.

46. (New) The structure of claim 41, wherein said adhesive tape is a single sided adhesive tape.

47. (New) The structure of claim 41, wherein said third material is a thin layer of material applied to one or both of said die and said circuit board, at a location adapted to face an inlet for an encapsulation compound.

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48. (New) The structure of claim 41, wherein said third material resides on said die.

49. (New) The structure of claim 41, wherein said third material resides on said circuit board.

50. (New) The structure of claim 41, wherein said die is a memory die.

51. (New) A processor system comprising:

a memory; and

a processor coupled to said memory, at least one of said processor and said memory being in the form of a die which is coupled to a circuit board by an adhesive system, said adhesive system comprising:

a first adhesive material provided between said die and said circuit board, said first adhesive material being in parallel to a length of a wirebond slot in said circuit board, said first adhesive material residing on a first side of said wirebond slot;

a second adhesive material provided between said die and said circuit board, said second adhesive material being in parallel to said length of said wirebond slot in said circuit board; said second adhesive material residing on a second side of said wirebond slot; and

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a third material provided on said circuit board and extending between said first and second materials to form a diversion dam for an encapsulation material, wherein said third material is an adhesive tape.

52. (New) The system of claim 51, wherein said first material is an adhesive tape.

53. (New) The system of claim 52, wherein said adhesive tape is a double sided adhesive tape.

54. (New) The system of claim 51, wherein said second material is an adhesive tape.

55. (New) The system of claim 54, wherein said adhesive tape is a double sided adhesive tape.

56. (New) The system of claim 51, wherein said adhesive tape is a single sided adhesive tape.

57. (New) The system of claim 51, wherein said third material is a thin layer of material applied to one or both of said die and said circuit board at a location adapted to face an inlet for an encapsulation compound.

58. (New) The system of claim 51, wherein said third material resides on said die.

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59. (New) The system of claim 51, wherein said third material resides on said circuit board.

60. (New) The system of claim 51, wherein said die is a memory die.

61. (New) A method of encapsulating a semiconductor package, said method comprising:

securing a first adhesive material between a die and a circuit board, said first adhesive material extending in parallel to a length of a wirebond slot in said circuit board, said first adhesive material residing on a first side of said wirebond slot;

securing a second adhesive material between said die and said circuit board, said first adhesive material extending in parallel to said length of said wirebond slot in said circuit board, said first adhesive material residing on a second side of said wirebond slot;

securing a third material between said die and said circuit board and extending between said first and second adhesive materials, wherein said step of securing said third material comprises securing said third material on said die; and

injecting a compound into a gate, said compound being directed by said third material to fill said wirebond slot last.

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62. (New) The method of claim 61, wherein said step of securing said third material comprises applying a thin layer of material on said die, said thin layer of material contacting said first and second adhesive materials to form a diversion dam.

63. (New) The method of claim 61, wherein said step of securing said third material comprises applying a thin layer of material on said circuit board, said thin layer of material contacting said first and second adhesive materials to form a diversion dam.